

REMARKS

Claims 1-18 are pending and are rejected. Claim 19 is added.

Applicant thanks the Examiner for the courtesy of a telephone interview on April 25, 2002, discussing the amendments presented herein.

Applicant respectfully requests reconsideration of the Examiner's rejections for the following reasons.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112

Claims 1-18 are rejected under 35 U.S.C. § 112 ¶ 2 as indefinite. Applicant respectfully disagrees.

The phrase "an agent consisting essentially of" indicates that the composition does not include other hormones or other bioactive compounds (instant specification at least at page 3, lines 19-21, and page 5, lines 16-19).

The phrase "a response" indicates an optimum physiological replacement dose with a risk of side effects within an acceptable range (instant specification at least at page 5, lines 14-16).

The phrase "daily basis" refers to administration once a day, every day, as per a dictionary definition "daily" attached as Exhibit A: "1. Every day; 2. Once a day." Webster's II New College Dictionary, 285 (1999).

Regarding the phrase "at least one serially increased initial dose of said agent," applicant asserts that the method consists of replenishing human growth hormone in adults in an individualized manner. The specification discloses that an initial dose is

followed by at least one serially increased dose, determined by physical response as well as attainment of desired levels of IGF-1 (instant specification, at least at page 6, lines 6-8).

Regarding the phrases “said maintenance dose is administered monthly” or “said optimal dose is administered monthly,” applicant asserts that these indicate that the maintenance dose could be administered on a monthly, as opposed to a daily, basis. This is described at least at page 7, lines 1-9.

Regarding the term “about”, applicant respectfully asserts that it is not indefinite, in view of applicant's disclosure that the proper initial dosage for an individual is determined based on that individual's IGF-1 levels. The proper maintenance dosage for an individual is determined based on that individual's response to a previous dosage, as well as his/her IGF-1 levels, with a typical initial dosage of 2 $\mu\text{g}/\text{kg}/\text{day}$ for a male and 4 $\mu\text{g}/\text{kg}/\text{day}$ for a female, and a typical maintenance dosage in the range of 10-14 $\mu\text{g}/\text{kg}/\text{day}$ for a male and 14-20 $\mu\text{g}/\text{kg}/\text{day}$ for a female. Since gender also provides a means of determining the dose, applicant respectfully asserts the claimed doses are not indefinite.

Applicant has amended claims 11 and 12-17 to provide antecedent bases, as required.

Applicant thus believes the amended claims and above explanations fully overcome the rejections under 35 U.S.C. § 112.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

Claims 1-18 are rejected under 35 U.S.C. § 102(b) as anticipated by Chein. Applicant respectfully disagrees.

Applicant's method of replenishing hGH comprises administering an agent consisting essentially of hGH, and excluding other hormones or other bioactive compounds. In contrast, Chein replenishes hGH as well as at least two other hormones that are below physiological levels. Thus, the agent administered in Chein's method consists of hGH and at least two other hormones.

Applicant's method of replenishing human growth hormone (hGH) is an individualized process. The maintenance dose of hGH is determined by evaluating the individual's response to serially increased doses of hGH every two to four weeks. If there is no response and IGF-1 levels are not optimal, the individual will receive a dose of hGH increased by an amount equal to the initial dosage, that is, serially increased.

In contrast, Chein teaches a method whereby each adult is monitored every thirty days for the sole purpose of determining whether the IGF-1 levels have reached a pre-determined amount. If they have not, the hGH dosage is increased by an uncertain amount until such pre-determined level is attained. Thus, Chein's method is neither individualized, nor are the dosages serially increased.

Applicant's method, once a desired maintenance dose is determined, allows the administration of hGH either on a daily or a monthly basis. In contrast, Chein's method requires the administration of the maintenance dose two times a day. Regarding the Examiner's suggestion that the term "once daily" be added to point out the difference, applicant respectfully asserts that the phrase "daily basis" is definite, as previously analyzed.

Attached hereto is a marked-up version of the changes made to the application by the current amendment.

CONCLUSION

Applicant has submitted all fees believed to be necessary herewith. Should any additional fees or surcharges be deemed necessary, the Examiner has authorization to charge fees or credit any overpayment to Deposit Account No. 23-3000.

The Examiner is invited to contact the undersigned attorney if there are any questions or issues.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Paragraph beginning at page 4, line 13 has been amended as follows:

A method is disclosed to replenish the age-related decline in human growth hormone (hGH) in adults by administering an individualized dosing regime of hGH in the absence of any other bioactive compounds. In the method, the individual initially receives incrementally increasing doses of hGH (inductive dose), while undergoing physiological and sociological assessment to determine the effect of hGH. Base[s]d on these outcomes, a maintenance dose to achieve the desired hGH replenishment for the individual is then determined. Thereafter, the individual receives this maintenance dose of hGH, either on a daily or monthly basis, depending upon his or her preference. Outcomes of this method of individualized hGH therapy include increased bone density, muscle and lean body mass, decreased fat body mass, improvement in serum lipid levels, for example, the ratio of "good" and "bad" cholesterol, improvement in skin tone and elasticity, improved cerebral function, improved sexual function, and an improved general sense of well being.

The Abstract has been amended as follows:

ABSTRACT

METHOD OF OPTIMIZING GROWTH HORMONE REPLACEMENT

A method to replenish human growth hormone (hGH) in a human adult.

[A] An initial daily dose of hGH is administered for three to four weeks, then an

individualized maintenance dose is determined by determining the individual's response to serially increased doses of the initial dose. The maintenance dose is then administered, usually in a microsphere formulation so that monthly dosing is possible. The method is useful to alleviate some of the effects of aging in mature adults.

IN THE CLAIMS

Claims 11, 12, and 17 have been amended as follows:

11. (AMENDED) The method of claim 10 wherein said [optimal] dose producing said optimal response is administered monthly.
12. (AMENDED) The method of claim 10 wherein bioavailability data are obtained [used to calculate said maintenance dose].
17. (AMENDED) The method of claim 16 wherein bioavailability data for said individual [is] are determined before administering said maintenance dose.

New claim 19 has been added.

EXHIBIT A

Webster's II
New College Dictionary



Houghton Mifflin Company
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M
D

The

Webster's
completely up-to-date
fast-changeable
computerized
DVD to

Webster's

Biographical
people from

Geographical
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Abbreviations
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Style Guide
and punctuation

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ist) n. A technician.
killer cell.

sat. emperor. — see **ocrat**. 3. *Informal*. One's **zar** **dom** n. . An intricate Hungarian for the czardas. **tsarevich** : tsar, czar, **dest** son.

vna : tsar'. czar + son. 2. A czarevitch's wife. — **tsar's** (-t'sär) n. [Pol. czar] em of government.

ARINA. A native or resident of Czechs. — **Czech**

cts following the first

mal. Father.

na (-z'äm) n. [Fr.] A went (1916-23) that sought the abolition of tradition of comic derision in which the guiding principle is 'tik) adj.

ather.

pl. **daddy longlegs** (ngida, with a small, male fly.

datum, neuter p. part. of **pedestal** between wall of a room, decorative panels. 3. a. A rectangle may be fitted into it. b. **toes**. 1. To furnish with a dado.

k. **daidalos**.] 1. Com. employed.

dalos < **daidalos**, skillful inventor, builder of the **an** (di-dä'lé-an, -dä'lé-an)

4. **affodill** < ME **affodill** (DEL.) 1. a. A bulbous plant. b. yellow flowers with a cluster of the daffodil. 2. **aff**

obs. **daff**, fool < ME **daff** (zy < a daffy person>). **affish** < OE gedæft, meek, soft. Frolicsome. — **daff**

k of matted or dung-covered.

Myth. The Babylonian god

short pointed weapon a dagger. b. Something like a double dagger.

dag > **agōn** < Heb. *Dāgōn*, dim. of Philistines and later i half-fish.

After Louis J. M. **Dag**

photographic process with

ated metallic plate. 2. A

ture made by daguerreotype. — **vt. -typed, -typ-ing, -types**. To make a daguerreotype of. — **da-guerre** 'o-typ er n. — **da-guerre** 'o-typ'y n.

dag-wood also **Dag-wood** (däg'wüd') n. [After **Dagwood Bumstead**, a character who made such sandwiches in the comic strip *Blondie* by Murat B. Young (1901-1973).] A multilayered sandwich having various fillings.

dah (dä) n. A dash in Morse code.

dahl-ia (däl'ya, däl', däl') n. [NLat. *Dahlia*, genus name, after Anders Dahl (d. 1789).] 1. A plant of the genus *Dahlia*, indigenous to Mexico and Central America, with tuberous roots and usu. large, variously colored flowers. 2. The flower of a dahlia.

da-hoon (da-hün') n. [Orig. unknown.] An evergreen shrub or small tree. *Ilex cassine* of the southeastern United States, having red fruit.

dai-ly (dä'lé) adj. [ME *dayly* < OE *dæglig* < *dæg*, day.] 1. Performed, taking place, or appearing every day or weekday <a *daily* jog> 2. For each day <a *daily* telephone record> 3. Day-to-day : everyday <an appliance for *daily* use> — **adv.** 1. Every day <Take exercise *daily*> 2. Once a day <Wind your watch *daily*> — **n., pl. -lies**. A newspaper published every day or every weekday.

daily double n. A bet won by selecting both winners of two specified races on one day, as in horse racing.

dai-mi-o also **dai-my-o** (di'mé-ō', dim'yō') n., pl. **daimio** or -mios also **daimyo** or -myos. [I. *daimyo* : *dai*, great (< Chin. *da*) + *myo*, name (< Chin. *ming*?).] A hereditary nobleman in Japan's feudal period.

dai-mon (di'món') n. var. of **DEMON** 3, 4.

dain-ty (dán'té) adj. -tier, -ti-est. [ME *deinte*, excellent < *deinte*, excellence, dignity < OFr. *deintie* < Lat. *dignitas* < *dignus*, worthy.] 1. Delicately beautiful : EXQUISITE. 2. Delicious : choice. 3. Of refined taste : DISCRIMINATING. 4. Overfastidious. — **n., pl. -ties**.

A delicacy. — **dain'ti-ly** adv. — **dain'ti-ness** n.

dai-qui-ri (di'kä-ré, däk'ä-ré) n., pl. -ris. [After *Daiquirí*, Cuba.] An iced cocktail of rum, lime or lemon juice, and sugar.

dair-y (där'ë) n., pl. -ies. [ME *daierie* < *date*, dairymaid < OE *dæg*.] 1. A commercial establishment that processes or sells milk and milk products. 2. A place where milk and cream are stored and processed. 3. A dairy farm. 4. The dairy business.

dairy cattle pl.n. Cows bred and raised for milk.

dairy farm n. A farm for producing milk and milk products.

dair-y-ing (där'ë-ing) n. The business of a dairy.

dair-y-maid (där'ë-mäd') n. A woman who works in a dairy.

dair-y-man (där'ë-män) n. 1. A dairy manager or owner. 2. A man who works in a dairy.

deis (dä'ës, däs) n. [ME *deis* < OFr. *platfrom* < LLat. *discus*, table. — see *DISK*.] A raised platform, as in a lecture hall, for honored guests or speakers.

word history: *Dais* is a word that was borrowed into English twice. It first appeared in the 13th century as *deis*, from Old French *deis*, indicating a table raised on a platform at which honored guests were seated. *Dais* was also used of the platform alone. This word died out in England in the 16th century; it survived, however, in Scotland with the meaning "bench." In the late 18th century historical writers revived the word. Although they used the modern French spelling *dais*, the appearance of *dais* probably represents a borrowing from English itself rather than from French, because the modern French word means only "canopy." The French forms *deis* and *dais* are ultimately derived from Latin *discus*, which in medieval times meant "table." *Dais* is thus cognate with *disk*, *dish*, and *desk*.

dai-zy (dä'zë) n., pl. -sies. [ME *daisie* < OE *dægeséage* : *dæg*, day, eye, eye.] 1. A plant having rayed flowers, esp. a widely naturalized Asian plant, *Chrysanthemum leucanthemum*, having flowers with a yellow center and white rays. 2. A low-growing European plant, *Bellis perennis*, having pink or white rayed flowers. 3. The flower of a daisy. 4. Slang. Something excellent or notable.

word history: The name *daisy*, a compound word meaning "day's eye," was originally applied to the European plant *Bellis perennis*, which is called in the United States the *English daisy*. The term "day's eye" is especially appropriate to this plant because it folds its petals at night and opens them in the morning with the sun, like an eye that sleeps and wakes.

Dakin's solution (dä'kënz) n. [After Henry Drysdale **Dakin** (1880-1952).] A dilute sodium hypochlorite solution used in cleansing wounds.

Dak-o-ta (däk'ō-tä) n., pl. **Dakota** or -tas. 1. A member of any of the Sioux peoples, esp. any of the eastern branch peoples located in Minnesota, eastern Nebraska, and the eastern Dakotas. 2. The Sioux language of the Dakota. — **Da-ko'tan** adj. & n.

Da-lai La-ma (dä'lé lä'mä) n. [Tibetan *bla-ma*, monk.] The traditional governmental ruler and high-priest of the Lamaist religion in Tibet and Mongolia.

dal-a-pon (däl'ä-pōn') n. [Blend of DI, ALPHA, and PROPIONIC ACID.] An organic acid used as a herbicide.

da-la-si (dä-lä'së) n., pl. **dalasi**. [Native word in Gambia.] — See table at **CURRENCY**.

dale (dä'l) n. [ME < OE *dæl*.] A valley.

da-leth (dä'léth', -lëth') n. [Heb. *dáleth* < *dālt*, door.] The fourth letter of the Hebrew alphabet. — See table at **ALPHABET**.

dalles (dälz) pl.n. [Fr. pl. of *dalle*, gutter < OFr. < ON *dæla*.] The steep precipices forming the sides of a gorge or narrow valley, usu. having rapids at the bottom.

dal-li-ance (däl'ë-ans) n. 1. Frivolous action : dawdling. 2. Playful flirtation.

Dal-lis grass (däl'ës) n. [Prob. alteration of *Dallas*, Texas.] A South American grass, *Paspalum dilatatum*, grown in the southern United States for pasture.

dal-ly (däl'ë) v. -lied, -ly-ing, -lies. [ME *dalien* < OFr. *dalier*.] — **vi.** 1. To play amorously : FLIRT. 2. To trifle. 3. To waste time : DWADLE. — **vt.** To waste (time). — **dal'li-er** n. — **dal'ly-ing** adv.

Dal-ma-tian (däl-mä'thën) n. A dog believed to have been bred orig. in Dalmatia, having a short, smooth white coat covered with black or dark-brown spots.

dal-mat-ic (däl-mät'ik) n. [ME *dalmatik* < Med. Lat. *dalmatica* < Lat. *dalmaticus*, Dalmatian.] 1. A wide-sleeved garment worn over the alb by a deacon, cardinal, bishop, or abbot at Mass. 2. A wide-sleeved coronation garment worn by an English monarch.

dal-se-gno (däl sän'yō) adv. [Ital., from the sign §] Mus. From a place marked by the sign § to a designated point. — Used as a direction to repeat a passage.

dal-ton (döl'tən) n. [After John Dalton (1766-1844).] Atomic mass unit.

dal-ton-ism also **Dal-ton-ism** (döl'tə-niz'm) n. [After John Dalton (1766-1844).] Red-green colorblindness. — **dal-to'ni-an** (döl-tö'né-ən) adj.

dam¹ (däm) n. [ME.] 1. A barrier built across a waterway to control the flow or raise the level of water. 2. A body of water controlled by a dam. 3. An obstruction : hindrance. — **vt.** **dammed**, **dam-ming**, **dams**. 1. To build a dam across or hold back by a dam. 2. To obstruct or restrain : CONFINE.

dam² (däm) n. [ME *dam*, *dame*. — see **DAME**.] 1. A female parent. — Used of a quadruped. 2. Archaic. A mother.

dam-age (däm'ë) n. [ME < OFr. < *dam*, loss < Lat. *damnum*.] 1. Impairment of the usefulness or value of person or property : HARM. 2. **damages**. Law. Money to be paid as compensation for injury or loss.

3. *Informal*. Cost : price. — **v.** -aged, -ag-ing, -ag-es. — **vt.** To cause injury to : HARM. — **vi.** To suffer or be susceptible to damage. — **dam'age-a-ble** adj. — **dam'ag-ing** adv.

dam-ar (däm'är) n. var. of **DAMMAR**.

dam-as-cene (däm'ä-sén', däm'ä-sén') vt. -cened, -cen-ing, -cenes. [OFr. *damasquiner* < *damasquin*, of Damascus.] To decorate (metal) with wavy inlaid or etched patterns. — **dam'as-cene** n. & adj. — **dam'as-cene** n.

Da-mas-cus steel (däm'ä-süs'kës) n. An early form of steel with wavy markings, developed in Near Eastern countries, esp. Persia, and used primarily in sword blades.

dam-ask (däm'ësk) n. [ME < Med. Lat. (*pannus de*) *damasco*, (cloth of) Damascus.] 1. A rich patterned fabric of cotton, linen, silk, or wool. 2. A fine, twilled table linen. 3. Damascus steel. 4. The wavy pattern on Damascus steel. — **vt.** -asked, -ask-ing, -asks. 1. To **dam-scene**. 2. To decorate or weave with rich patterns.

damask rose n. [**< obs.** *Damask*, *Damascene*, *Damascus*.] A rose indigenous to Asia, *Rosa damascena*, with sweet-smelling red or pink flowers used as a source of attar.

damask steel n. Damascus steel.

dame (däm) n. [ME < OFr. < Lat. *domina*, fem. of *dominus*, lord, master.] 1. A title once given to a woman in authority or to the mistress of a household. 2. A married woman : MATRON. 3. Slang. A woman. 4. *Chiefly Brit.* a. Archaic. The legal title of the wife or widow of a knight or baronet. b. A title of a woman equivalent to that of a knight.

dame's rocket n. A plant indigenous to Europe, *Hesperis matronalis*, with fragrant purple or white flower clusters.

dame's violet n. Dame's rocket.

da-min-o-zide (däm'ë-zid') n. [D(IMETHYL) + AMINO- + (HYDRAZINE) + -IDE.] A chemical plant growth regulator, $C_6H_{12}N_2O_3$, used commercially on apples to retard growth, enhance color, and increase storage life.

dam-mar or **dam-mar** also **dam-mer** (däm'är) n. [Malay *damar*, resin.] Any of various hard resins obtained from Indo-Malayan trees of the genera *Shorea*, *Balanocarpus*, and *Hopea* and used in varnishes and lacquers.

damn (däm) v. **damned**, **damn-ing**, **damns**. [ME *dampnen* < OFr. *dampner* < Lat. *damnare*, to condemn, inflict loss upon < *damnum*, loss.] — **vt.** 1. To pronounce an adverse judgment on. 2. To bring about the failure of : RUIN. 3. To condemn as injurious, illegal, or immoral <damn drugs and alcohol> 4. To condemn to eternal punishment : DOOM. 5. To swear at by using the word "damn." — **vi.** To swear : curse. — **interj.** — Used to express anger, irritation, contempt, or disappointment. — **n.** 1. The saying of "damn" as a curse. 2. *Informal*. A